ACTIVITY 5: Can We Feel Air?

Objective: Students will recognize how air feels when it is moving fast even though air is invisible.

Duration: 1 class period

Materials:

- ❑ 1 Box fan
- ❑ 1 Dozen pieces of paper strips
- ❑ 1 Sheet of Paper, 8.5"x11" per student

Vocabulary:

- ❑ Wind
- ❑ Work

Focus Questions:

- ❑ What do you feel on your face when you run?
- ❑ Have you even been outside on a windy day?
- ❑ Does air do work?

Activity Procedure:

1. Tell the students to close their eyes.
2. Place the box fan on a desk or table.
3. Explain to the students that they will be feeling something against their faces, which is invisible, will be moving very fast but will not hurt them in any way.
4. Line the students in a single file, having each student stand in front of the fan separately. When the student is directly in front of the fan, turn the fan on. Run the fan from medium to high speed for best results.
5. After all the students have had the opportunity to experience the fan, ask the students what they felt. Listen to their responses.
6. After the responses, explain that what they were feeling was air moving very fast and how the fan makes air move very fast.
7. Ask the students to give examples of when air is moving fast.
8. Hand out several paper strips to each student.

9. Instruct the students to bend the paper strips in half, place them on the table in front of the box fan standing on the 2 folded ends.
10. Ask the students to guess what will happen to the paper strips when the fan is turned on.
11. Turn the fan on.
12. Ask the students if they know what blew over all the paper strips. Ask the students if they think air does work? Ask the students if they can name any other things which use air? Explain to the students about a characteristic of air -- that it does work.

For Grades 1-3:

1. Depending on the weather, take the students to a place where there is plenty of room to run. If it is a nice day, the activity can be done outside in a playground or field. If not, it can be performed in a gymnasium.
2. At the activity area, pick a few volunteers.
3. Hand each volunteer a piece of 8.5"x11" paper.
4. Ask the rest of the class what they think will happen to a piece of paper if the volunteer puts it against his/her stomach while walking forward without holding the paper in place.
5. Then instruct one of the volunteers to hold a piece of paper against his/her stomach in place. Have the student let go of the paper when he/she begins to walk forward. (The paper should fall to the ground.)
6. Ask the class if they have any ideas why the paper didn't stay against the volunteer's stomach.
7. Ask the students what they think will happen to the piece of paper if they put it against their stomach and ran in a straight line without holding it in place.
8. Select the second volunteer. Have the volunteer place the paper against their stomach and hold it with their hand.
9. Tell him/her to begin running in a straight line and let go of the paper when they begin running.
10. Ask the class if they know why the paper stayed in place when the student ran and what caused the paper to stay in place.
11. Have the rest of the students who want to try it, do so.
12. Afterwards, explain that the force holding the paper in place when the student ran was air.
    a. When you run, air is pushing against you. The air was working to hold the piece of paper against your body.
    b. While walking, the paper didn't stay in place because the air wasn't pushing very hard against their body.

13. Answer any questions the students may have about how air does work.

Follow-up Questions:

- ❑ Does air do work?
- ❑ Name some ways that air can do work?